

What is claimed is:

1. A system for generating and using an interactive user interface comprising:

5 a head end for generating a bitstream representing an encoded user interface;

a distribution network coupled to said head end; and
subscriber equipment, coupled to said distribution network, for decoding and displaying said user interface.

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2. The system of claim 1 wherein the head end comprises:

a user interface generator for producing said bitstream; and

a modulator.

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3. The system of claim 2 wherein the user interface generator comprises a user interface source and an encoder.

20 4. The system of claim 3 wherein said user interface source comprises:

a video source;

a graphics source; and

an overlay source.

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5. The system of claim 4 wherein said user interface generator produces a plurality of bitstreams and further comprises a multiplexer for assigning bitstream identifiers to each of said bitstreams in said plurality
30 of bitstreams.

6. The system of claim 1 wherein the distribution network is a hybrid fiber-coax network.

7. The system of claim 1 wherein the subscriber equipment comprises:

- a demodulator;
- a demultiplexer; and
- 5 a decoder.

8. A method of generating and using an interactive user interface comprising the steps of:

- generating, within a head end of an information
- 10 distribution system, a bitstream representing an encoded user interface;
- broadcasting said encoded user interface;
- receiving said encoded user interface; and
- decoding and displaying said user interface.

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9. The method of claim 8 wherein said generating step further comprises the steps of:

- producing a video signal representing a user
- interface;
- 20 encoding said video signal to produce said bitstream
- ; and
- modulating said bitstream into a format for
- transmission.

25 10. The method of claim 9 wherein the video signal is a composite of a video image and a graphics image.

11. The method of claim 9 further comprising the step of assigning a bitstream identifier value to said bitstream.

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12. The method of claim 8 wherein said generating step further comprises the steps of:

- producing a plurality of video signals representing a
- plurality of user interfaces;

encoding said video signals to produce a plurality of bitstreams; and

arranging said bitstreams into at least one transport stream; and

5 modulating said at least one transport stream into a format for transmission.

13. The method of claim 12 wherein said at least one transport stream comprises a system stream that contains a
10 plurality of transport streams.

14. The method of claim 8 wherein the decoding step further comprises the steps of:

extracting a bitstream from a transport stream;

15 decoding the bitstream to produce a user interface.

15. The method of claim 14 wherein said extracting step further comprises the step of:

identifying said bitstream to be extracted by a
20 bitstream identifier value.

16. The method of claim 8 further comprising the steps of:

selecting an object within the user interface;

25 sending a signal to the head end in response to the selection of the object; and

causing an event to occur within said head end in response to said signal.

30 17. The method of claim 16 wherein said event is one or more of tuning said subscriber equipment to an analog channel, tuning said subscriber equipment to a digital channel, causing a locally resident event to occur.

18. A method of generating and using an interactive user
35 interface comprising the steps of:

generating, within a head end of an information distribution system, a transport stream that contains a plurality of bitstreams representing a plurality of encoded user interfaces;

5 broadcasting said transport stream;
 receiving said transport stream;
 extracting from said transport stream a select
 bitstream; and
 decoding and displaying said select bitstream to
10 produce said user interface.

19. The method of claim 18 further comprising the steps
of:

 selecting, in a first user interface, an object that
15 identifies said select bitstream;

 decoding said select bitstream without resetting a
buffer in a decoder.

20. The method of claim 18 further comprising the steps
20 of:

 producing an overlay graphic for selectively
emphasizing objects within said user interface.

21. The method of claim 20 further comprising the steps
25 of:

 selecting an emphasized object to change the context
of the system from a user interface context.

22. The method of claim 21 wherein said context is
30 changed to a pay per view movie context, a broadcast
television context, a preview context or a sales context.

23. The method of claim 21 wherein changing the context
causes the decoder to extract a different bitstream for
35 decoding.

24. The method of claim 21 further comprising decoding an audio bitstream that is associated with a video region of said user interface.

25. The method of claim 24 wherein said audio is continuous through transitions to other user interfaces.

26. A method of generating and using an interactive user interface comprising the steps of:

encoding a user interface using slice based encoding to produce a plurality of bitstreams where each bitstream represents a different portion of the user interface;

generating, within a head end of an information distribution system, a transport stream that contains the plurality of bitstreams representing a slice based encoded user interface;

broadcasting said transport stream;

receiving said transport stream;

extracting from said transport stream a plurality of select bitstreams; and

decoding said select bitstreams to produce decoded portions of said user interface;

performing slice based splicing reassemble said user interface from said decoded portions.

27. The method of claim 26 wherein each bitstream is assigned a separate program identification value.

28. The method of claim 26 wherein each portion of said user interface contains different rates of motion.